E:fact® Technical Service Data

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Product #083503

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ZENITH

Models
SMS2549S
SMS2549SM
SMS2550S

SCHEMATIC NOTES

For SAFETY use only equivalent replacement part, see parts list.

Circuitry not used in some versions.

Circuitry used in some versions.

Ground

Chassis ground

Common tie point

Taken from common tie point

3 Schematic voltage source tie point.

A Cabling: Heavy lines reduce use of multiple lines.

Waveforms and voltages are taken from ground, unless noted otherwise.
Waveforms taken with triggered scope and keyed rainbow generator. Waveform voltage is peak to peak. Timebase is per division. Waveforms shown at 10 divisions.
Supply voltages maintained as seen at input.
Voltages measured with digital meter and a 1000µV RF signal, with colorbar pattern, applied to antenna terminal.
Controls adjusted for normal operation.
Capacitors are 50 volts or less, 5% or greater unless noted.
Electrolytic capacitors are 50 volts or less, 20% or greater unless noted.
Resistors are 1/2W or less, 5% or greater unless noted.
Value in ( ) used in some versions.
Measurements with switching as shown, unless noted.
Rated voltage shown on zener diodes.

PARTS LIST

COILS & TRANSFORMERS

Item No.	Function/Rating	Mfr. Part No.
DY1	Yoke 100° Horiz .79mH Vert 10mH	95-3608-04
L1200	22µH	20-4277-26A
L1201	AFT	20-4172-12A
L1202	Video Detector	20-4172-05A
L1203	Audio Detector	20-4278B
L1205	.82µH	20-4277-09A
L2101	-	-
L2200	16µH	20-4277-24A
L2202	12µH	20-4277-40A
L2203	-	-
L3000	Degaussing	20-4330-19
L3201	Horizontal Linearity	20-4073-03
L3206	Ferrite Bead	-
L3208	68µH	20-309-22A
L3299	Ferrite Bead	149-576-01

COILS & TRANSFORMERS continued

	Item No.	Function/Rating	Mfr. Part No.
	L3412	Ferrite Bead	149-576-01
	L3413	-	20-4201
	L3414, 15	Ferrite Bead	149-576
	L3499	Ferrite Bead	-
	L5500	120µH	20-3907-25A
	L6000	1µH	20-4277-10A
	L6001	-	-
	L6012	10µH	20-3907-12A
	L6090	68µH	20-3907-22A
#	**LX3401**	Line Choke	95-3868-02
#	**TX3200** (1)	Horizontal Output	95-4430
#	**TX3201**	Horizontal Driver	95-4445
		Horizontal Driver	95-4442
#	**TX3410**	Regulator	95-4443

TUNER

L3	-	20-4470-03
L4	-	20-4470-05
L5	-	20-4470-06
L6	-	20-4470-07
L7	-	20-4470-08
L8	-	20-4470-09
L9	-	20-4470-10
L10	-	20-4470-11
L13	-	20-4470-02
L14	-	20-4470
L15	-	20-4470-13
L16	-	20-4470-12
L17	-	20-4470-02
L19	-	20-4470-14
L22	-	20-4470-15
L23	-	20-4470-16
L30	-	20-4470-17
L100	-	20-4470-27
	-	20-4325-01
L101	-	20-4328-46
	-	20-4470-18
L102	-	20-4442
L103, 04	-	20-4470-01
L106	-	20-4470-19
L107	-	20-4470-20
L108	-	20-4470-21
L109	-	20-4470-22
L111	-	20-4470-23
L112	-	20-4470-24
L113	-	20-4470-25
L114	.22µH	20-4277-60A
L117	-	20-4470-26
L118	3.3µH	20-4277-16A
L149	1.0µH	20-4277-10A

 # For SAFETY use only equivalent replacement part.
(1) Focus and screen (G-2) controls are part of TX3200.

PARTS LIST continued

MISCELLANEOUS

	Item No.	Description	Mfr. Part No.	Notes
	CR2200	Crystal	224-27A	3.58MHz
	CR2212	Resonator	224-131	503kHz
	CR6000	Crystal	224-157A	12.083916MHz
	CRT1	Socket	78-3394	CRT
#	**FX3499**	Fuse	136-113-23A	4Amp, 250V, Normal Lag
	IR1	Receiver	162-35	Remote
#	**KX3401**	Relay	195-158	Degaussing
	P3400	Line Cord	A-17339	AC, Polarized
	SP1	Speaker	49-1368-03	2" X 5", 8 Ohms, 5W
	SW1	Switch	85-1691A	Off/On
	SW2	Switch	85-1691A	Channel Up
	SW3	Switch	85-1691A	Channel Down
	SW4	Switch	85-1691A	Volume Up
	SW5	Switch	85-1691A	Volume Down
	SW6	Switch	85-1691A	Menu
	SW7	Switch	85-1691A	Select
	SW8	Switch	85-1691A	Adjust Right
	SW9	Switch	85-1691A	Adjust Left
	SW10	Switch	85-1691A	Enter
	TU6000	Tuner (1)	175-2402	UHF/VHF
	U1200	Filter	224-54A	4.5MHz
	U1201	Trap	224-160	SAW
	U2200	Delay Line	105-218	-
	U2201	Filter	224-23	4.5MHz
	V1	CRT	-	A63ADG31X
		Balun	A-14323	Antenna
		Fuse Holder	19-840-02	For FX3499 (2 Used)
		Magnet	A-7690-05	Purity/Convergence
		PC Board (1)	A-17931	Keyboard
		PC Board (1)	9-1458-01	Main
		Transmitter	124-185-06	Remote
		Transmitter	124-157-37	Remote, Used in model SMS2550S
		Wedge	152-338	Yoke Positioning (3 Used)

TUNER

XT1	Crystal	224-138	4MHz

 # For SAFETY use only equivalent replacement part.
(1) Contact PTS Electronics Corporation for replacement; order by manufacturer's part number.

PARTS LIST continued

CONTROLS & RESISTORS

	Item No.	Function/Rating	Mfr. Part No.	NTE Part No.
	R1208	5000 RF AGC	63-11007-25	-
	R2106	10K Vertical Size	63-11007-27	-
	R3201	2200 5% 2W	-	2W222
		4700 5% 3W	63-11164-88A	3W247
	R3419	1000 5% 10W Wirewound	63-10458-96	10W210
		820 5% 7W Wirewound	63-10449-94A	-
	R5509	1000 Blue Gain	-	-
		2000 Blue Gain	63-10857-31	-
	R5510	1000 Red Gain	-	-
		2000 Red Gain	63-10857-11	-
	R5511	1000 Green Gain	-	-
		2000 Green Gain	63-10857-32	-
	R6068	5100 2% 1/4W	63-10233-89	QW251
	R6069, 70	1000 2% 1/4W	63-10233-72	QW210
#	**RX806**	1000 5% 1/4W	-	QW210
#	**RX807**	1 5% 1/4W	63-10559	QW1D0
#	**RX809**	10 5% 1/2W	63-10565-24C	HW010
#	**RX810**	1 5% 1/4W	63-10559	QW1D0
#	**RX2260**	820 5% 1/8W	63-10979-45	EW182
#	**RX2261**	3300 5% 1/8W	63-10979-59	EW233
#	**RX2263**	5.6 5% 1/8W	63-10980-35	EW5D6
#	**RX2264**	4700 5% 1/8W	-	-
		2200 5% 1/8W	63-10979-55	-
#	**RX2265**	3900 5% 1/8W	-	-
		2400 5% 1/8W	63-10979-56	-
#	**RX2266**	3300 5% 1/8W	63-10979-59	EW233
#	**RX3401**	2.2M 10% 1/2W	-	HW522
		5.6M 20% 1/2W	63-11182	HW556
#	**RX3402**	1000 5% 1/4W	63-10235-72	QW210
#	**RX3410**	56K 5% 1/2W	63-11088-14	HW356
#	**RX3411**	56K 5% 1/4W	63-10236-14	QW356
#	**RX3412**	680 5% 1/4W	63-10235-68	QW168
#	**RX3413**	100 5% 1/4W	63-10235-48	QW110
#	**RX3414**	56K 5% 1/2W	63-11088-14	HW356
#	**RX3415**	56.2K 1% 1/2W	63-11082-72	-
#	**RX3417**	3730 1% 1/4W	-	-
		3400 1% 1/4W	63-10936-59	-
#	**RX3421**	1.8 5% 2W	-	2W1D8
		1.2 5% 2W	63-10420-26	2W1D2
#	**RX3425**	1 5% 5W Wirewound	63-10442-24A	5W1D0
#	**RX3449**	220K 5% 1/2W	63-11088-28	HW422
#	**RX3450**	1 5% 1/2W	63-10565	HW1D0
#	**RX3475**	250 B+	63-10857-34	-
#	**RX3480**	1.5 5% 5W Wirewound	63-10442-28A	5W1D5
#	**RX3497**	12.8 Cold PTC	63-10710A	-

 # For SAFETY use only equivalent replacement part.

PARTS LIST continued

CAPACITORS & ELECTROLYTICS

	Item No.	Rating	Mfr. Part No.
	C1218	18pF 5% 50V NPO	22-8241-16A
	C1219	68pF 5% 50V NPO	22-8241-30A
	C1220	30pF 5% 50V N150	22-8245-21A
	C1221	7pF ±.5pF 50V NPO	22-8241-07A
	C2205	1µF 20% 50V NP	22-8190-01A
	C3209	470pF 10% 500V NPO	22-7786-10C
	C3221	220pF 3kV	-
	C3416	.001 10% 1kV	-
		.001 10% 500V	22-7786C
	C3472	.001 10% 1kV	22-7811A
	C5503	.001 10% 2kV	22-7523
	C5504	.01 +80% -20% 1.5kV	22-7755
	C6093	.01 10% 50V N075	22-8257-24A
	C9717	1µF 50V NP	-
#	**CX804**	1000µF 20% 25V	22-8310-16
#	**CX2223**	4.7µF 20% 50V	22-8312-07A
#	**CX2224**	47µF 20% 25V	22-8310-11A
#	**CX3203**	.019 3% 1.6kV	22-8229-41
#	**CX3210**	530pF 10% 3kV	22-8063
#	**CX3402**	.47 5% 250V	22-7876-20
#	**CX3410**	.001 10% 1kV	22-7811A
#	**CX3411**	1µF 20% 100V	-
		1µF 20% 50V	22-8312-04A
#	**CX3412**	330µF 20% 25V	22-8310-14
#	**CX3413, 14**	220µF 20% 160V	-
		47µF 20% 160V	22-8315-11
#	**CX3418**	.001 10% 1kV	22-7786C
		.001 10% 500V	22-7786C
#	**CX3425**	.0047 20%	22-7431-06
#	**CX3449**	470µF 20% 200V	22-7819-10
#	**CX3474**	2200µF 20% 16V	22-8309-17
#	**CX3499**	.0047 20%	22-7431-06

TUNER

C2, 4, 7	.001 +130% -0% 50V Feedthru	22-7894-06
C9	82pF 10% 50V Feedthru	22-7993-06
C10, 11	.001 +80% -20% 50V Feedthru	22-8304-02
C13, 14	43pF 10% 50V Feedthru	22-8303-03

 # For SAFETY use only equivalent replacement part.

PARTS LIST continued

CABINET PARTS

Item	Part No.
Model SMS2549S	
Cabinet Front	14-12142-19
Cabinet Rear	14-12181
Cabinet Tray	14-12143-01
Jack Panel - Antenna	12-10156-17
Lens - Primary Controls and Remote Receiver	192-858-01
Pushbutton Knob	46-10554

SEMICONDUCTORS

(Select the replacement that gives the best results.)

	Item No.	Type No.	Mfr. Part No.	NTE Part No.	ECG Part No.	TCE Part No.
	C3483	-	-	-	-	-
	CR800, 01	-	103-398	-	-	-
	CR1201	-	103-279-18A	-	-	-
	CR2100	-	103-326A	NTE552	ECG552	SK9000
	CR2201	-	103-279-18A	-	-	-
	CR2202	-	103-398	-	-	-
	CR2206	-	103-279-18A	-	-	-
	CR2207 Thru					
	CR2211	-	103-398	-	-	-
	CR2213 Thru					
	CR2218	-	103-398	-	-	-
	CR3200, 01	-	103-284A	NTE552	ECG552	SK9000
	CR3203	-	103-279-36A	NTE5085A	ECG5085A	SK36V
	CR3488, 90	-	103-295A	NTE177	ECG177	SK9091
	CR3492	-	-	-	-	-
	CR3493	-	103-279-10A	NTE5010A	ECG5010A	SK5A1
	CR6002	-	103-398	-	-	-
	CR6090	-	103-279-18A	-	-	-
#	**CRX2203, 04**	-	103-398	-	-	-
#	**CRX2205**	-	103-279-18A	-	-	-
#	**CRX3204**	-	-	-	-	-
#	**CRX3410**	-	103-326A	NTE552	ECG552	SK9000
#	**CRX3411**	-	-	-	-	-
#	**CRX3412**	-	103-326A	NTE552	ECG552	SK9000
#	**CRX3471** Thru					
#	**CRX3474**	-	103-315-06A	NTE116	ECG116	SK3313
	IC2100	LA7833	221-903	-	-	-
	IC3200	-	221-166	NTE960	ECG960	SK3591
	IC6000	-	221-898	-	-	-
	IC6001	-	221-745-04	-	-	-
#	**ICX1200**	TA8879N	221-806	-	-	-
	Q800	-	121-975A	NTE123AP	ECG123AP	SK3854
	Q801	-	121-1300-01A	-	-	-
	Q802	-	121-1301-01A	-	-	-
	Q1201	-	121-1261A	-	-	-
	Q1202	-	121-975A	NTE123AP	ECG123AP	SK3854
	Q2200	-	121-1019A	NTE159	ECG159	SK3466
	Q2201, 09	-	121-975A	NTE123AP	ECG123AP	SK3854
	Q2210	-	121-1256A	-	-	-
	Q2212	-	121-1019A	NTE159	ECG159	SK3466
	Q3201	-	121-1290	-	-	-
	Q3420	-	121-973A	NTE159	ECG159	SK3466
	Q3422	-	121-1145A	NTE290A	ECG290A	SK3114A
	Q3423	-	121-1146A	NTE123AP	ECG123AP	SK3854
	Q5500, 01, 02	-	121-1291-01	-	-	-
	Q5503	-	121-1140	NTE399	ECG399	SK9352
	Q6000, 01, 02	-	121-975A	NTE123AP	ECG123AP	SK3854
	Q6003	MPS4250	-	NTE159	ECG159	SK3466
	Q6004	-	121-975A	NTE123AP	ECG123AP	SK3854
	Q6020	-	121-978-03A	NTE159	ECG159	SK3466
#	**QX3200**	-	121-1167-01	-	-	-

 # For SAFETY use only equivalent replacement part.

SEMICONDUCTORS continued

(Select the replacement that gives the best results.)

	Item No.	Type No.	Mfr. Part No.	NTE Part No.	ECG Part No.	TCE Part No.
#	**QX3410**	-	121-1146A	NTE123AP	ECG123AP	SK3854
#	**QX3412**	-	121-1299	-	-	-
	TUNER					
	CR1, 2	-	103-488A	-	-	-
	CR3	-	-	-	-	-
	CR4, 5	-	103-487A	-	-	-
	CR7, 8	-	103-488A	-	-	-
	CR10	-	103-487A	-	-	-
	CR11	-	103-488A	-	-	-
	CR12	-	103-487A	-	-	-
	CR14, 15	-	103-488A	-	-	-
	CR101 Thru CR106	-	103-487A	-	-	-
	IC1	-	221-748	-	-	-
	IC2	-	221-760	-	-	-
	Q1	-	121-1216A	-	-	-
	Q3, 04, 05	-	121-1282A	-	-	-
	Q7	-	121-1130A	-	-	-
	Q101	-	121-1162A	-	-	-

 # For SAFETY use only equivalent replacement part.

A

B

SEE IC6000 PIN 14 PAGE 1A

R6032 51K
C6025 .0033
C6026 .01
R6017 1000
CR6002
11 5.0V
R1219 27K (100)
R1220 39K
C1213 .001
R1221 36K
10 9.6V

L1201
C1220 30pF N150
C1221 7pF NPO
C1205 47pF

R1204 1000
U1200 4.5MHz FILTER
L1200 2.2
SEE IC6000 PIN 40 PAGE 1, A&B

53 3.2V
PART OF TA8879N ICX1200 IF/VIDEO PROCESSOR
5.3V 1

.5V 56
4.0V 54
4.4V 55
C1202 4.7µF
C1203 .068
4.4V 6 NC
3.1V 4
R1209 9100
C1222 .01
L1203

R1228 1500
C1217 1µF 100V
C800 .01
R801 13K
R800 47K

Q800 AUDIO AMP
.7V 4.2V .1V
R802 10

R803 68
CR800
R804 470
C802 470µF
R805 100
CR801
4 13.7V

Q801 AUDIO OUT
5.6V 5.0V
RX810 1
RX807 1
4.7V
Q802 AUDIO OUT
4 13.7V

C809 220µF NC
R812 20K
R813 2900
R814 10 NC NC
C803 220µF
R808 10
C805 .01
9L4 2
SP1 8Z
9L4 1

2.3V 10µs
2.1V 10µs
1.5V 10µs
1.5V 10µs

Q2201 AMP
1.1V 1.7V
C2210 1µF 100V
R2215 1000
9 9.0V
R2213 1300
U2200 13.3
R2214 1600
C2213 39pF

SEE TUNER IF OUT PIN 9 PAGE 1D

C1211 .001
Q1201 AMP
10.2V 1.7V 1.0V
C1209 .001
R1217 100
R1215 470
R1213 2200
R1216 22
L1205
R1212 100
C1210 .01
C1212 .01
C1230 .001
R1231 33
R1214 100
8 13.5V

U1201 SAW FILTER
2 3 4
1 5 10

52 5.6V
51 3.2V
4.0V 9
PART OF TA8879N ICX1200 IF/VIDEO PROCESSOR
3.5V 47

Q2200 VIDEO AMP
4.2V
R2205 1000
9 9.0V
R2204 220
L2200 1.5
U2201 4.5MHz TRAP
C2205 1µF
CR2213
45 3.4V
PART OF TA8879N ICX1200 IF/VIDEO PROCESSOR
3.3V 40
2.1V 42
41
R2216 220

4.0V 9
7.3V 2
8
48 10 9.6V
2.5V 3
7.0V 49
7.0V 50
5.8V 5
5.3V 7
C2240 39pF
R1211 47
C1218 18pF NPO
R1218 1500
C1207 .022
IF AGC RANGE 5.5V TO 9.0V
C1219 68pF NPO
L1202
Q1202 AMP
4.7V 5.3V 2.5V
R1227 47K
R1226 47K
C1208 .47µF
11 5.0V
R2228 47K

2.5V 10µs
TAKEN WITH BAR SWEEP GENERATOR

SEE IC6000 PIN 32 PAGE 1, A&B
Q2209 STABLE DISPLAY
R2226 10K .7V
0V
R2225 8200
9 9.0V
R2229 10K
R2231 4700
R2230 10K
CR2214
R2227 13K
R2212 100
R9740 100
C9717 1µF
R9739 10K

2.5V 10µs
TAKEN WITH CHROMA BAR SWEEP GENERATOR

SEE TUNER AGC PIN 4 PAGE 1C

C6096 2.2µF 100V
R1299 (W10) 100
RF AGC RANGE 7.0V TO 8.0V
R1206 4700
10 9.6V
R1205 24K
R1208 RF AGC 5000
R1207 27K
10 9.6V
C1206 .01

SEE IC6000 PIN 30 PAGE 1, A&B
CR2208
R2239 47K
C2231 1µF 100V
R2235 11K
R2234 20K
R2240 3900
R2241 4700
C2219 4.7µF
9 9.0V

SEE IC6000 PIN 34 PAGE 1, A&B
R2291 1200
C2237 .01

SEE IC6000 PIN 24 PAGE 1, A&B
R2247 9100
R2248 33K
CR2209
R2250 56K
C2208 .01
L2203
C2211 62pF (.001)
R2249 33K
C2220 4.7µF
R2221 470

SYNC

3.7V 10µs
5.8V 10µs
2.2V 5ms
1.4V 5ms
52V 5ms

PART OF TA8879N ICX1200 IF/VIDEO PROCESSOR
39 6.0V
6.9V 12
4.7V 11
1.2V 21
.2V 22
5.2V 25
7.2V 24
2.2V 26
4.8V 23
30
.9V 27
4.9V 31

C2209 2.2µF
9 9.0V
C2203 .022
R2203 3300
C2202 2.2µF
C2243 .001
R2200 2000
C2200 2.2µF

R2262 11K
CX2223 4.7µF
RX2266 3300
CRX2205 9.1V
CRX2204
RX2261 3300
CRX2203
RX2263 5.6
RX2264 4700 (2200)
CX2224 47µF
RX2265 3900 (2400)
C2226 470pF

R2267 390
CR2212 503kHz
C2225 .01
R2268 10K
C2232 1µF 100V
2 9.0V

2 9.0V
R3212 680
R2108 15K
R2109 1000
C2104 4.7µF
R2103 15K
C2105 2200µF
R2107 68K (22K)
R2106 VERT SIZE 10K
C2106 .47
C2106 2.2µF
R2293 1000
SEE Q6004 BASE PAGE 1A
C2235 .001
R2102 12K
C2111 .01
R2110 33K (68K)
R2104 1.5 (1.8)
R2105 1.5 (1.8)

C2102 220pF
R2270 2700
4 .7V
IC2100 LA7833 VERT DRIVER/OUT
15.0V 2
24.5V 3
3.5V 7
6
1
5 .7V
30V 5ms
C2100 47µF
CR2100
7 24.0V
7 24.0V
26V 5ms
C2229 .022
C2101 680pF
R2101 300
C2103 .1 100V
R2111 2.2
L2101
2Y2 1
2Y2 2
3Y3 1
3Y3 3
DY1 YOKE
.9
4.5
C3206 68 250V
C3204 470pF 500V
L3201
MAGNET
R3210 1000

C3214 Q3201 47pF HORIZ DRIVER
500V
.3V 57.0V
195V 10µs
C3213 220pF 500V
R3231 10K
C3233 .01 100V
C3201 2.2µF 100V (1µF 160V)
R3211 180
2.6V 10µs
TX3201
50 .2
R3201 2200 2W (4700 3W)
5 100V

C3221 220pF 3kV
QX3200 HORIZ OUT
-.08V 100V
0V
37V 10µs
L3206
CX3203 .019 1.6kV 3%
CX3210 530pF 3kV

RX2260 820
SEE Q6000 BASE PAGE 1A
R2259 1500
CR2202
A1 A2

10 1
9
8 2
11 7
6
5 4 3
TX3200 BOTTOM VIEW

VOLTAGES TAKEN WITH SIGNAL

ADDITIONAL SCHEMATIC NOTES, SEE PAGE 2D

A PHOTOFACT STANDARD NOTATION SCHEMATIC WITH [redacted]

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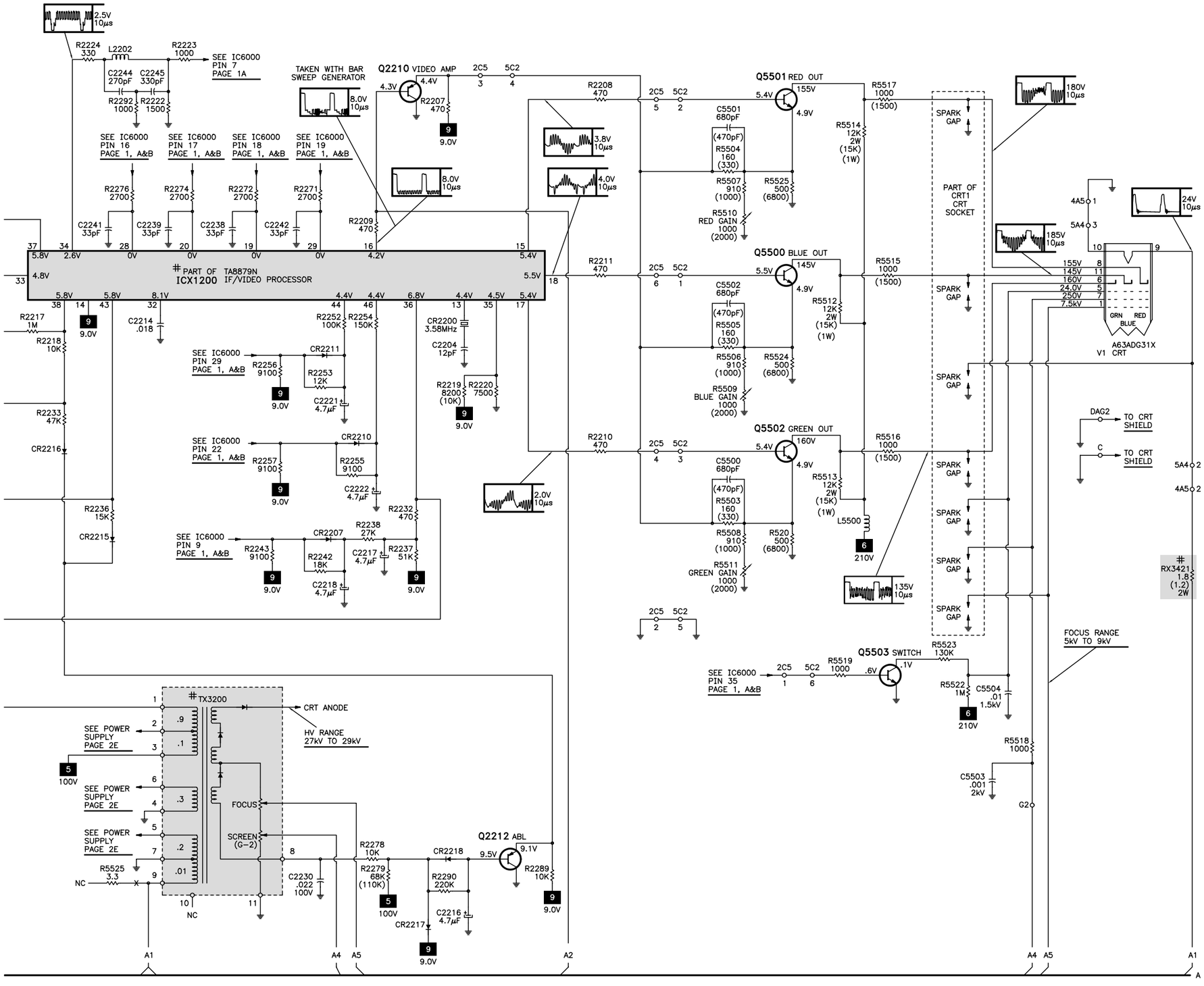
A

C

D



VOLTAGES TAKEN WITH SIGNAL

A PHOTOFACT STANDARD NOTATION SCHEMATIC

WITH [redacted]

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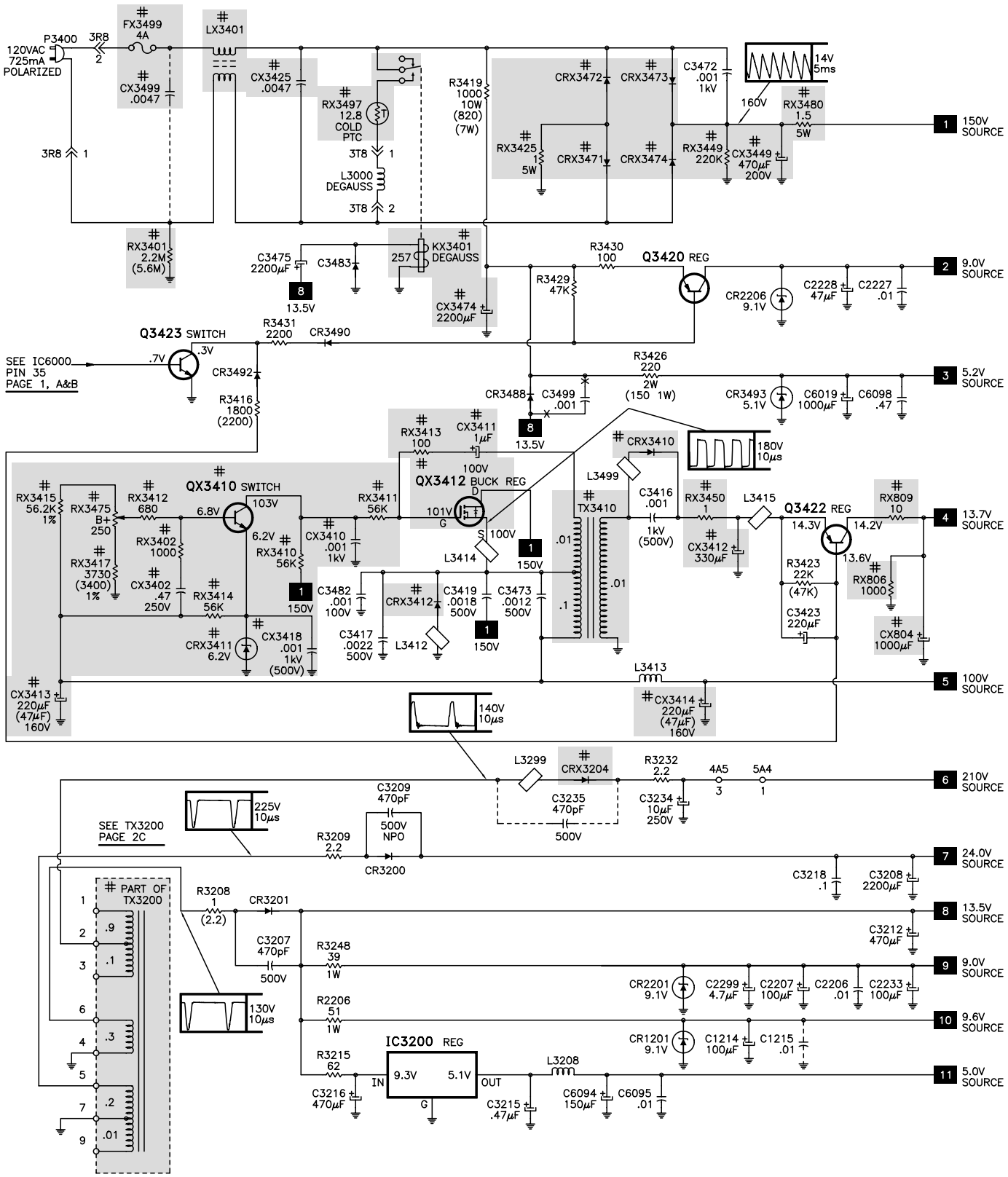

VOLTAGES TAKEN WITH SIGNAL

A PHOTOFACT STANDARD NOTATION SCHEMATIC WITH [redacted]

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ADDITIONAL SCHEMATIC NOTES, SEE PAGE 2D

A

B

IC6000
MICROCOMPUTER

IR1 REMOTE RECEIVER
GND
OUT
VCC
C2 4.7µF
R1 100
R7 10K
R6 330
R6018 4700
C6017 .047
C6017 1µF
SEE ICX1200 PIN 34 PAGE 2C
5.2V
R6005 1000
C6001 470pF
R6001 100K
R6006 1000
C6002 470pF
R6002 100K
R6007 1000
C6003 470pF
R6003 100K
R6008 1000
C6004 470pF
R6004 100K
R6012 1000
C6008 470pF
R6011 1000
C6007 470pF
R6010 1000
C6006 470pF
R6009 1000
C6005 470pF
SW10 ENTER
SW6 MENU
SW1 OFF/ON
SW9 ADJ ◀
SW4 VOL ▲
SW2 CH ▲
SW8 ADJ ▶
SW7 SEL
SW5 VOL ▼
SW3 CH ▼

IR/P25 5.2V — 36
AFC2 .2V — 15
NC 0V — 26
VIDEO 2.4V — 7
P37 5.2V — 49
IDPO5 5.2V — 11
P36 5.2V — 48
P35 5.2V — 47
P34 5.2V — 46
P30 5.2V — 41
P31 5.2V — 43
P32 5.2V — 44
P33 5.2V — 45
V SYNC 4.1V — 20
VSSALT 0V — 1
H SYNC 4.8V — 21
VSS — 39
AFCI 2.9V — 14
PDD/P26 5.2V — 38
XTAL2 2.5V — 51
XTAL1 2.6V — 50
RESET 5.2V — 2
VDD 5.2V — 42
VDDALT .2V — 52
LF1 2.4V — 31

SLICECAP 2.1V — NC 8
PO0 0V — NC 3
PO1 0V — R6025 470 — NC; C6029 470pF
NC .2V — NC 10
PO2 0V — R6029 470 — NC; C6035 470pF; R6045 100K; 5.2V
NC 0V — NC 23
BOUT 0V — 16 — SEE ICX1200 PIN 28 PAGE 2C; C6013 47pF
GOUT 0V — 17 — SEE ICX1200 PIN 20 PAGE 2C; C6014 47pF
ROUT 0V — 18 — SEE ICX1200 PIN 19 PAGE 2C; C6015 47pF
FSOUT 0V — 19 — SEE ICX1200 PIN 29 PAGE 2C; C6016 47pF
DA1PO7 4.9V — 13
PO3 5.2V — NC 6
CK1PO6 4.8V — 12
P21 4.7V — 32 — SEE Q2209 BASE PAGE 2B; C6036 470pF; R6022 10K; 5.0V
PD0 .2V — NC 37
SDO2/P11 2.2V — 29 — SEE ICX1200 PIN 44 PAGE 2C; C6033 .001
P24 5.0V — 35
P23 4.7V — 34
SDO0 0V — 40
P22 0V — NC 33
SDO1P04 3.4V — 9 — L6001; C6030 .001
SDO4P10 2.0V — 22
SDO2P11 5.4V — 24 — SEE ICX1200 PIN 43 PAGE 2, B&C; C6032 .001
SDO3/P20 1.4V — 30
CK2P12 5.2V — 27
TEST — 25
DA2/P13 5.2V — 28

R6016 10K — SEE Q3423 BASE PAGE 2E; SEE Q5503 BASE PAGE 2D; C6024 470pF
SEE Q1202 EMITTER PAGE 2A; C6045 .01
R6000 2200 — SEE ICX1200 PIN 56 PAGE 2A; C6028 .001; C6000 10µF; R6013 22K; 3; 5.2V
L6001; SEE ICX1200 PIN 36 PAGE 2C; C6030 .001
SEE ICX1200 PIN 46 PAGE 2C; C6031 .001
SEE ICX1200 PIN 38 PAGE 2, B&C; C6034 .001
IC6001 EEPROM — 6: 5.2V; 5: 5.2V; 1: 5.2V; 2: 3: 4: 7: 8: 5.2V
C6010 470pF; R6015 2200; 3; 5.2V
C6009 470pF; R6021 2200; 3; 5.2V
C6012 .01; L6012; 3; 5.2V

R6091 33
L6090
8 13.5V
C6090 100µF
CR6090 9.1V
C6097 47µF
C6091 .01
SEE TUNER +9V PIN 7 PAGE 1C
R3213 22K
C6093 .01 N075
C6092 4.7µF
CR3203 33.0V
5 100V
SEE TUNER 33V PIN 10 PAGE 1D
11 5.0V
SEE TUNER +5V PIN 11 PAGE 1D
R6027 100
C6039 470pF
R6036 2200
11 5.0V
SEE TUNER DATA PIN 14 PAGE 1D
R6026 100
C6038 470pF
R6035 2200
11 5.0V
SEE TUNER CLK PIN 13 PAGE 1D

Q6004 VERT SYNC
SEE ICX1200 PIN 31 PAGE 2B
–.1V
12.3V
R6068 5100 2%
R6073 4700
C6040 .01
8 13.5V
Q6003 MPS4250 VERT AMP
12.3V
0V
6.2V
R6071 47K
R6072 15K
R6069 1000 2%
R6070 1000 2%
8 13.5V
Q6002 VERT SYNC
0V
4.1V
R6065 10K
11 5.0V
R6067 47K
C6052 470pF
R6028 10K
Q6000 AMP
SEE ICX1200 PIN 21 PAGE 2A
R6050 47K
–1.2V
1.0V
R6051 4700
C6050 220pF
R6052 3900
11 5.0V
Q6001 HORIZ SYNC
R6053 10K
0V
R6054 470
11 5.0V
C6059 470pF
SEE ICX1200 PIN 52 PAGE 2A
R6023 10K
3 5.2V
CR6000 12.083916MHz
C6022 22pF
C6023 20pF
Q6020 RESET
4.2V
5.2V
R6030 1000
R6020 5100
R6019 5100
C6037 .01
R6031 1000
3 5.2V
L6000
C6021 .47
C6020 .01
3 5.2V

VOLTAGES ON IC6000 PINS 1 AND 2 WERE MEASURED WITH HIGH IMPEDANCE METER TO PREVENT SHUTDOWN

VOLTAGES TAKEN WITH SIGNAL

ADDITIONAL SCHEMATIC NOTES, SEE PAGE 2D

A PHOTOFACT STANDARD NOTATION SCHEMATIC WITH [redacted]

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C

D

J1 ANT IN 75 OHMS

L101 L102 L103 L104 L100

C101 11pF (10pF)
C102 11pF (10pF)
C73 27pF
C74 27pF
L3
L4

CR101
C105 1.5pF
CR102
C103 12pF
R101 10K

C106 68pF
R102 39K
R107 150
R106 22K
R105 330K
R104 100K

Q101 UHF AMP
G1 G2 D S

R103 56
R108 390
R109 27
C107 .001
C108 470pF
C112 20pF

C113 68pF (4pF)
L106 L107
C114 15pF (47pF)
CR103
L108 L109
C116 13pF
R110 22K

CR104
L111 L112
C117 5pF (6pF)
C120 .001
C119 47pF
C118 13pF
R112 22K

IC1 BIPOLAR UHF/VHF MIXER/OSC
USOC B1
USOC B2
VHF IN
IF OUT

C31 .001
C123 .001
C128 100pF
C125 12pF
C126 15pF
C127 100pF
C130 8.2pF
R127 56K
CR106
L117
C131 .5pF
R117 56K
CR105
R119 56K
C142 1pF
R115 100 (150)
C27 4pF
R29 47K
C22 .001
R30 5600
L30
C132 .001
CR10

L113
C122 62pF
R113 470
C129 2pF
C133 1.5pF
R114 390
L114
L149
C58 .001
C124 .001
15 9.0V

C38 .001
L19
C9 82pF
C39 82pF (120pF)
R116 10K
IF OUT PIN 9
SEE PAGE 2A

R18 47K
CR5
C21 .001
Q5 B3
15 9.0V

Q1 VHF AMP
G1 G2 D S
R8 39K
R19 33
C17 .001
R15 150
R16 620
C16 .001
C81 .001
R11 100K
R14 75K
R17 10
L15
CR15
C26 .0022

L13 L17
R23 820
L14
L16
R24 820
CR7
CR8
C33 .0022

C57 6pF
CR11
C181 .001
NC NC NC NC NC NC NC NC

IC2 PHASE-LOCKED LOOP

Q7 AMP
C144 36pF
C160 36pF
XT1 4MHz
C141 .1
C140 .047
R132 22K

L9
C82 .001
R65 1500
L8
C75 6pF
CR2
C76 .001
L5
CR3
R3 47K
R7 1000
L10
C18 .001
C199 (Q6) .001
L118
15 9.0V SOURCE
C7 .001
+9V PIN 7
SEE PAGE 1B

R6 1000
CR4
R9 47K
C121 .001
R62 1200
C78 220pF
C77 .0022
R1 820
R2 1500
C80 1pF
CR1
L6
L7
C70 .001
R12 100
C24 .0022
C35 .0022

R27 100
C2 .001
NC
TUNING VOLTAGE PIN 2
C4 .001
AGC PIN 4
SEE PAGE 2A

Q4 B2
15 9.0V
R42 1200
R56 10K
C56 .001

Q3 B1
15 9.0V
R148 1000
C48 .001
R37 47K
CR12
C47 91pF
R125 10K
C51 150pF
CR14
R41 1500
L23
L22
C52 5pF
R47 1000
R39 820
R120 10K
C10 .001
33V PIN 10
SEE PAGE 1B

R128 1000
C14 43pF
R129 1000
C13 43pF
C11 .001
+5V PIN 11
C170 .1
DATA PIN 14
CLK PIN 13
SEE PAGE 1B

VOLTAGES TAKEN WITH SIGNAL

ADDITIONAL SCHEMATIC NOTES, SEE PAGE 2D

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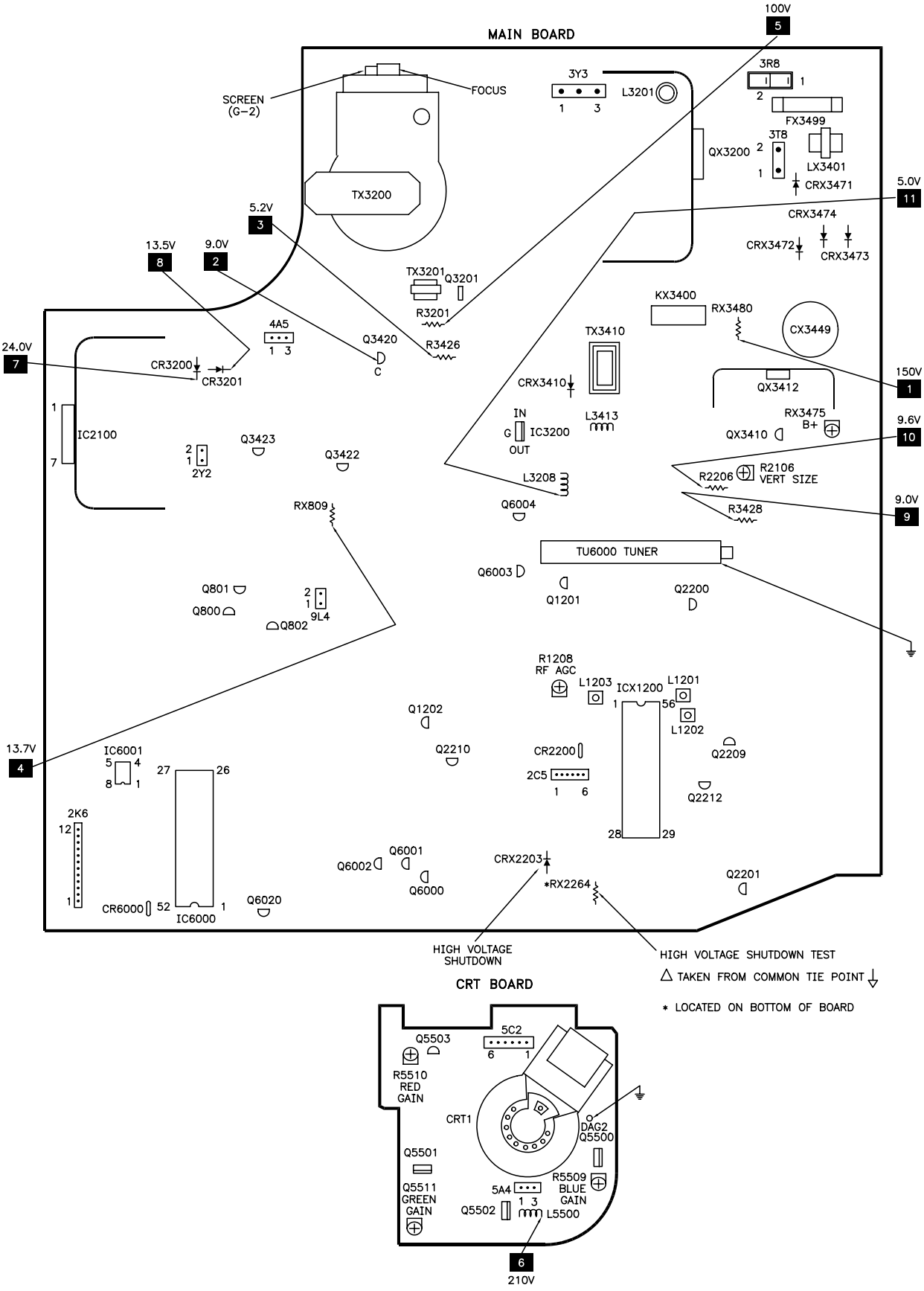
MAIN BOARD
100V
5
SCREEN
(G-2)
FOCUS
3Y3
L3201
3R8
FX3499
3T8
QX3200
LX3401
CRX3471
5.0V
11
TX3200
5.2V
3
CRX3474
CRX3472
CRX3473
13.5V
8
9.0V
2
TX3201
Q3201
R3201
KX3400
RX3480
CX3449
4A5
Q3420
R3426
TX3410
24.0V
7
CR3200
CR3201
CRX3410
150V
1
QX3412
IC2100
IN
G
IC3200
OUT
L3413
RX3475
B+
9.6V
10
QX3410
Q3423
2Y2
Q3422
L3208
R2206
R2106
VERT SIZE
Q6004
RX809
9.0V
9
R3428
TU6000 TUNER
Q6003
Q1201
Q2200
Q801
Q800
Q802
9L4
R1208
RF AGC
L1203
ICX1200
L1201
L1202
Q1202
Q2210
Q2209
CR2200
2C5
Q2212
13.7V
4
IC6001
2K6
IC6000
CR6000
Q6020
Q6001
Q6002
Q6000
CRX2203
*RX2264
Q2201
HIGH VOLTAGE
SHUTDOWN
HIGH VOLTAGE SHUTDOWN TEST
△ TAKEN FROM COMMON TIE POINT
* LOCATED ON BOTTOM OF BOARD
CRT BOARD
5C2
Q5503
R5510
RED
GAIN
CRT1
DAG2
Q5500
Q5501
R5509
BLUE
GAIN
5A4
Q5511
GREEN
GAIN
Q5502
L5500
6
210V